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AUTHOR Ungerer, E.
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ABSTRACT

The paper describes steps taken in initiating a program for gifted students undertaken in 11 secondary schools in Cape Province, South Africa. The development of an identification model was made difficult because the fixed South African educational system inhibits creativity and productive thinking abilities. Factors used to select students for the program included previous and current academic achievement, intelligence quotient behavior characteristics, and teacher and pupil nominations. Differentiated goals were developed for each participating school based on numbers of students and staff involved, facilities available, and geographical area. Within each school, a steering committee of interested staff designed a prototype program which used combinations of the four available teaching strategies: enrichment, grouping, acceleration, and guidance. The system of withdrawal is used heavily in all 11 schools. Curriculum design presented the greatest difficulty for each school; the most popular model used was Bloom's Taxonomy of Objectives. The Betts and Knapp model on autonomous learning was also useful. Evaluations considered both the program as a whole and the individual pupil's work. Descriptive examples of programs developed in three of the schools are provided. (VW)

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# INITIATING REALISTIC PROGRAMMES FOR GIFTED PUPILS IN SECONDARY SCHOOLS IN THE CAPE PROVINCE WITHIN THE BOUNDARIES OF THE PRESENT EDUCATIONAL SYSTEM, WITH SPECIAL REFERENCE TO THE PROBLEMS SURROUNDING THIS TRANSITIONAL PERIOD

MR. E. UNGERER
DURBANVILLE HIGH SCHOOL
P.O. BOX 417
DURBANVILLE R.S.A.
7550

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The main aim of this paper is to make participants aware of a few important steps in initiating a program for gifted pupils in secondary schools in the Cape Province.

Examples of existing strategies in the experimental schools will be given simultaneously, to give participants a chance to compare theory with practice, and to become aware of existing problem-areas.

Hopefully this can contribute to helping other schools not yet involved in the program, to start more confidently.

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INITIATING REALISTIC PROGRAMMES FOR GIFTED PUPILS IN SECONDARY SCHOOLS IN THE CAPE PROVINCE WITHIN THE BOUNDARIES OF THE PRESENT EDUCATIONAL SYSTEM, WITH SPECIAL REFERENCE TO THE PROBLEMS SURROUNDING THIS TRANSITIONAL PERIOD.

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A few introductory statements to this paper.

(i) The contents of this paper must be seen against the background of that which is being done in the eleven experimental high schools in the CapeProvince.

(ii) The Education Department opted to make provision for gifted pupils within the ordinary high school for various reasons which will not be discussed in this paper.

(iii) The word program in this paper refers to the total provision and organization made for gifted pupils in a high school and not to a spesific program or project being done by a pupil.

(iv) As it will only be possible to deal with the framework of such a program in the time allocated I would like to recommend the following books for further reading:

- Kaplan, S. 1974. Providing Programs for the Gifted and Talented. A Handbook.
- Arnold, A. et al., 1981. Secondary Programs for the gifted/talented.
- Tuttle, F.B. et al., 1983. Program Design and Development for gifted and talented students.
- Taylor, C.A. et al., 1983. Die Onderrig van die Begaafde Kind.

All these books are available at the Resources Centre, Gifted Child, P.O. Box 13, Cape Town.

## INITIATING A GIFTED CHILD PROGRAMME

It is important that a school should first commit itself to doing something for the gifted pupils and then appoint a coordinator whose main task will be to initiate the program.[1)]

### 1. DEFINE "GIFTED" (Definition)

Many definitions of giftedness can be found in American and other literature, but the one accepted currently in the Cape Province is as follows:

"Gifted and talented children are those who possess demonstrated or potential intellectual, creative or specific academic abilities and need differentiated educational services beyond those being provided by the regular school programme in order to realize these potentialities for self and for society. A child may possess singularly or in combination these characteristics:

(i) general intellectual ability
(ii) specific academic aptitutde
(iii) creative or productive thinking abilities." [2)]

Renzulli adds"a high level of task commitment" as another characteristic which has to be taken into consideration. He stresses the importance of this characteristic in the way in which he designed the Enrichment Triad Model where three types of activities are described. In all these activities the gifted child has to be active and success demands a high level of task commitment.[3)]

However, the problem lies not in defining giftedness but in developing an identification model that can include those that one assumes to be gifted. In the South African context this is very difficult because our fixed educational system has inhibited creativity and productive thinking abilities. We, teachers parents and pupils, are concerned more about the pupils obtaining marks and memorising facts than about thinking abilities. We might therefore be inclined to identify academically gifted pupils, measuring academic aptitude by looking only at marks and not the mastering of skills in different subjects. It is therefore important to look into the aspect of identification as a second step in the initiation-process.

### 2. IDENTIFICATION

Identification has over the years proved itself to be one of the most problematic areas in gifted education. One of the main reasons for this

is the fact that gifted pupils are found at two extremes in the school's population. On the one hand some stand out as clearly superior to their peers but on the other hand, there are those whose giftedness is hidden or who hides it so well that they are more likely to be branded as "problem" cases rather than "gifted". Many of these "problem" kids are also non-achievers with slim chances of being identified as gifted, for most teachers tend to place academic achievement first on the priority list of identification categories.

There are many ways and many different models that can be used to identify gifted pupils, but it is imperative that four major factors should be kept into consideration when creating an identification model:

2.1 One has to distinguish among at least four types of giftedness, namely:

- academic giftedness
- creative giftedness
- giftedness in leadership and
- giftedness in the arts. [4)]

A model must clearly state which, if all, of these types are being taken into consideration.

2.2 Secondly one has to make sure that the "hidden" gifted pupils and/or the underachievers are also identified.

2.3 Multiple categories must be used in this identification process. This is necessary, for inmost cases, these categories are not universal. Different countries and peoples will have different categories in their identification models. (This implies that the definition of giftedness for different countries/areas/schools will also differ.) It is therefore not advisable to take an identification model used in another country and apply it without adapting it to suit one's specific circumstances.

2.4 The creative ability of the pupils should betaken into consideration.

The following model was developed for and are used by most of the secondary schools in the Cape Province who have programmes for gifted pupils.

NAME..... DATE OF BIRTH.....

DATE.....AGE.....ST.....MA.....

PROFILE

| | | | | | | |
|---|---|---|---|---|---|---|
| 5 | 100% | 100% | 150 | 5 | | |
| 4 | 90 | 90 | 140 | 4 | | |
| 3 | 80 | 80 | 130 | 3 | | |
| 2 | 60 | 60 | 120 | 2 | | |
| 1 | 40 | 40 | 110 | 1 | | |
| | | | | | | |

| Previous Academic Achievement | Current Academic Achievement | Total I.Q. | Behaviour | Teacher Nomination | Pupil Nomination |
|---|---|---|---|---|---|

N.B.: Every individual is to be assessed on his own merits - the profile is only an aid in selection.

If a pupil is assessed as lying on 3 or above in three of the six categories, he should be considered for inclusion in the gifted group.

If a pupil is assessed as lying on 3 or above in two of the six categories, he should be considered for referral to the School Psychologist or Clinic.

KEY

PREVIOUS ACADEMIC ACHIEVEMENT: Identify the central tendency in the range of the pupil's annual average percentage as far back as his records allow.

CURRENT ACADEMIC ACHIEVEMENT: Identify pupil's current average percentage - taking care to adjust for differing grade levels.

I.Q.: Identify intellectual level as reflected by total score.

BEHAVIOUR: Identify the number of behaviours characteristically manifested by pupil from these

* SELF-MOTIVATED (independence, Perseverance
* CRITICAL (questioning, curious

* PERCEPTIVE (morally and aesthetically sensitive
* CREATIVE (imaginative, productive
* INSIGHTFUL (catches on quickly

TEACHER NOMINATION: Subjectively judged on 5-point scale

* UNUSUAL (strange behaviour/qualities
* EXCEPTIONAL (very strong ability/ies in isolation - eg. excellent writer/poet or Mathematician

PUPIL NOMINATION: Subjectively judged on 5-point scale

* POPULAR for positive reasons
* RESPECTED

5)

A thorough discussion of this model will not be given but after studying it one realizes that although the academically gifted pupils and under-achievers are to a large extent identified by this model, virtually no information about creativity or leadership can be derived from it. The Renzulli-Hartman scale can be used to fill this gap but it must be remembered that our pupils and teachers are not necessarily creatively orientated because we exist within a system whereby high marks are vital for obtaining bursaries as well as university-entrance and whereby a good matric carries a lot of status.

A few other problems encountered with this model are:

- The subjectivity of the responses in the categories of behaviour and teacher nomination.
- Creating an instrument to implement pupil nomination.
- Teachers influencing each other when rating a pupil on the behavioural aspects.

3. ESTABLISHING DIFFERENTIATED GOALS:

A number of pupils have now been identified and realistic goals have to be set within which these pupils can be accommodated.

It is most important that the main aims of gifted education be stated clearly, but it is even more important that specific goals be set for specific schools, because the chances are remote that two schools will have exactly the same program.

It is suggested that the following factors be kept in mind when specific

goals are set:

- The number of pupils in the school;
- The number of members of staff
- Physical facilities available;
- The normal load each member has to carry;
- The area in which the school is situated.[6)]

These factors are especially important when seen against the background of a gifted program being established within a fixed system. It was agreed upon by all the experimental schools that the program should be started with as few gifted pupils as possible and that more kids could be identified as the program in the school developed, even if it meant that the cut-off point be lifted.[7)]

## 4. DEVELOPMENT OF A PROGRAM

It is suggested that at this point a steering committee of interested staff members be formed. The headmaster, teacher psychologist and librarian should be members of this committee. However, it is not advisable to force any member of staff to join this committee. The main task of this committee will be to develop a realistic program for the school or to design a prototype (as it will be called later) for their particular school.

### 4.1 Designing a Prototype

Kaplan defines a prototype as "an organizational pattern which becomes the setting for the learning environment that accommodates the needs of the gifted and talented.[8)]

#### 4.1.1 Components of any prototype

- Time designation
- Movement pattern
- Personnel
- Numbers affected
- Communication channels
- Record-keeping Procedures
- Learning expectancies

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4.1.2 Strategies needed to develop a prototype

Four teaching strategies can be used to develop a prototype, namely

(i) enrichment,

(ii) grouping,

(iii) acceleration and

(iv) guidance.

These strategies can be used individually or together depending on the needs of the specific school. Kaplan illustrates these strategies as well as the organizational forms in which they can be implemented clearly in Table 1.

ENRICHMENT

ENRICHMENT IS ...

EXPERIENCES WHICH REPLACE, SUPPLEMENT, OR EXTEND LEARNINGS AS THE BASIS FOR EACH TYPE OF PROTOTYPE. ENRICHMENT IS THE REASON FOR THE DEVELOPMENT OR ADOPTION OF ANY PROTOTYPE.

| *GROUPING<br>PROVISIONS WHICH FACILITATE THE STUDENT'S ACCESS TO LEARNING OPPORTUNITIES | * ACCELERATION<br>ACTIVITIES WHICH PROMOTE LEARNING BEYOND REGULARLY PRESCRIBED CURRICULUM | *GUIDANCE<br>EXPERIENCES WHICH PROMOTE UNDERSTANDING OF THE SELF AND OTHERS AND EXPLORE OPPORTUNITIES FOR CAREERS |
|---|---|---|
| - CLUSTER GROUPING WITHIN THE REGULAR CLASS | - EARLY ENTRANCE OR PRESCHOOL CLASSES | - INDIVIDUAL CONFERENCES |
| - SPECIAL REGULAR CLASSES | - DOUBLE GRADE PROMOTION | - GROUP MEETINGS |
| - PART-TIME GROUPS BEFORE, DURING, AFTER SCHOOL OR SATURDAYS | - ADVANCED PLACEMENT CLASSES | - CAREER AND VOCATIONAL COUNSELING |
| - SEMINARS | - UNGRADED CLASSES | - EDUCATIONAL COUNSELING |
| - MINICOURSES | - MULTI-AGE CLASSES | - COMMUNITY PROGRAMS AND SPONSORSHIP |
| - TEAM TEACHING | - TUTORING | - SHOLARSHIP SOCIETIES |
| - ALTERNATIVE SCHOOLS | - CORRESPONDENCE COURSES | - STUDY GROUPS |
| - RESOURCE ROOM OR DEMONSTRATION CLASSROOM | - EXTRA CLASSES FOR EXTRA CREDIT | - SPECIAL EDUCATION CLASSES |
| - INTINERANT OR RESOURCE TEACHER | - CREDIT BY EXAMINATION | - TUTORING |
| - FIELD TRIP AND CULTURAL EVENTS | - INDEPENDENT STUDY | |
| - SPECIAL SUMMER | - CONTINUOUS PROGRESS CURRICULUM | |
| | - YEAR-ROUND SCHOOL | |
| | - FLEXIBLE SCHEDULING | |
| | - BLOCK OR BACK TO BACK CLASSES | |

TABLE 1. ELEMENTS USED FOR DEVELOPING PROTOTYPES. (KAPLAN, 1974)

4.1.3 A model of a designed prototype:

Table 2 gives an indication of a designed prototype as planned by Kaplan.

DIRECTIONS: A PROTOTYPE IS DESIGNED BY INCORPORATING ELEMENTS RECOGNISED AS NECESSARY INTO AN OPERATIONAL PATTERN WHICH PROVIDES STUDENTS WITH AN ENVIRONMENT FOR LEARNING. IDENTIFY THE ELEMENTS TO BE INCLUDED IN THE PROTOTYPE. DEFINE THE ELEMENTS AS THEY APPLY TO THE PROTOTYPE. COMBINE THESE ELEMENTS INTO AN ORGANIZATIONAL PATTERN.

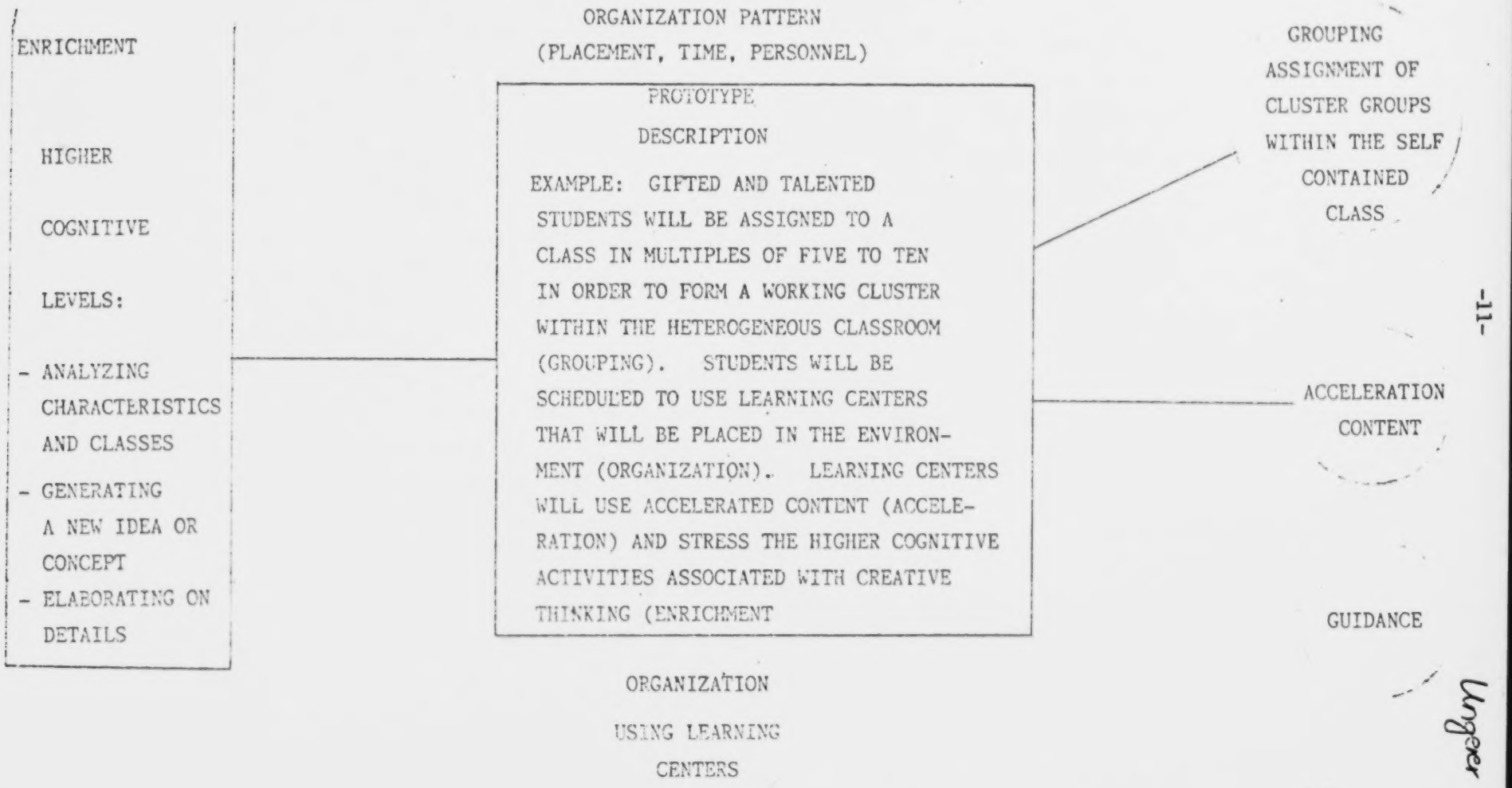
ENRICHMENT
HIGHER
COGNITIVE
LEVELS:
- ANALYZING CHARACTERISTICS AND CLASSES
- GENERATING A NEW IDEA OR CONCEPT
- ELABORATING ON DETAILS
ORGANIZATION PATTERN
(PLACEMENT, TIME, PERSONNEL)
PROTOTYPE
DESCRIPTION
EXAMPLE: GIFTED AND TALENTED STUDENTS WILL BE ASSIGNED TO A CLASS IN MULTIPLES OF FIVE TO TEN IN ORDER TO FORM A WORKING CLUSTER WITHIN THE HETEROGENEOUS CLASSROOM (GROUPING). STUDENTS WILL BE SCHEDULED TO USE LEARNING CENTERS THAT WILL BE PLACED IN THE ENVIRONMENT (ORGANIZATION). LEARNING CENTERS WILL USE ACCELERATED CONTENT (ACCELERATION) AND STRESS THE HIGHER COGNITIVE ACTIVITIES ASSOCIATED WITH CREATIVE THINKING (ENRICHMENT
ORGANIZATION
USING LEARNING
CENTERS
ELEMENTS TO BE INCLUDED:
GROUPING
ASSIGNMENT OF CLUSTER GROUPS WITHIN THE SELF CONTAINED CLASS
ACCELERATION
CONTENT
GUIDANCE

TABLE 2. A MODEL OF A DESIGNED PROTOTYPE (KAPLAN, 1974).



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In an outline of prototypes she also distinguishes between intra-classroom prototypes and extra-classroom prototypes whereby gifted pupils are provided for, inside, or outside, the classroom.

4.2 Prototypes in the Experimental Secondary schools in the Cape

It is a difficult task to design a prototype for a school which is set in a fixed educational system with guidelines distinctly different from other systems, especially the American system (from where most of the literature come). It is even more problematic when the people initiating the program are untrained and have to rely on overseas literature.

A few very definite prototypes have, however, been established of which three shortened examples will be given. These examples have, for certain reasons, not been molded into the model previously given.

School 1:

(i) Standard Six : Two groups of six meet for $\frac{1}{2}$ to 1 hour per week with the Principal and Co-ordinator and cover thinking skills.

(ii) Standard Seven : Magnet group of 23 for the six compulsory subjects, in which they do either accelerated or enriched work, or both.

(iii) Standard Eight : A group of 22 pupils who all do the same projects at the same time; these vary in length and content. The object is to spread/vary the type of study.

(iv) Standard Nine : 14 pupils are involved in individual research projects.

(v) Acceleration : 76 pupils in Standard 7-9 are undergoing an Advanced Mathematics course, first accelerated and then enriched. They meet in separate standard groups.

School 2:

(i) Standard Six : Mathematics is being accelerated and should be written off in August. These Maths periods (5) will then be shared by Computor Programmes - 3 periods per week - and creativity lessons. The History module of the History-Geography

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programme will be completed in ONE term, the THIRD term in the case of Maths and History, the marks attained in the third term will be compared to the final examination marks in December. Though separate papers, they will in each case be comparable in standard.

(ii) Standard Seven : Mathematics is being accelerated and should be written off in July/August. The available periods will be used for thinking techniques and game design. Comparison of marks will also take place as indicated for the Std VI group. In addition, the group will design a 90 minute programme of music, movement, lighting and dialogue.

(iii) Standard Eight : At present receive ONE period per week in PROBLEM SOLVING. This will be increased to TWO periods when the co-ordinator returns from long leave. In addition this group is working on a project which is aimed at investigating the lives of child prodigies and highly gifted youngsters.

(iv) Standard Nine : This group is receiving ONE period per week instruction in COMMUNICATION. This will probably be discontinued in JUNE.

School 3:

Std 6 - 10 :
- Project work (mentors)
- German magnet class meeting twice a week and smaller groups whenever they wish to withdraw from normal classes.
- Subject-enrichment within the class based on request of gifted pupil and/or teacher.
- Horizontal acceleration plus project.
- Std 9 - subject-acceleration per term - then std X work of same subject.

Std 6 and 7/ Std 8 and 9 : Meeting once a week as two separate big groups with co-ordinator to develop thinking skills.

4.2.1 Important aspects from the examples

- All the experimental schools (not only the three mentioned) make use to a large extent, of the system of withdrawal. The main reason for this is that it causes very little disruption of the school's administration e.g. the timetable.

- Some schools have more structured programmes than others because they have more members of staff involved and interested in the program.

- More schools are realizing the importance of some sort of training in skills, e.g. thinking skills, problem solving, and research skills. Teachers found that even gifted pupils tend to think very narrowly within a structured framework and that they need to be given the chance and opportunity to think safely outside this structured system.

- There is a tendency among the schools to differentiate among the different standard groups.
  The standard six pupils are usually given a chance to adapt to the high school environment and only included after one or two terms. Another reason for this differentiation is the fact that the younger pupils have not been included in any gifted programmes because there weren't any. They are, therefore, at a different level, especially where certain skills are concerned.

- Moderate vertical acceleration in specific subjects (mostly mathematics) is taking place. Great care should be taken to ensure that the upward movement is not too fast because the Matriculation Board Regulations state that six subjects must be written by all pupils at the end of their std 10 year.
  Horizontal acceleration within a year takes place freely. It is actually only a measure whereby a gifted pupil can create timefor himself within school hours to work on a different project.

- The magnet group/class can be used in standards six and seven, in schools with large numbers ($800^{+}$) but from standard eight onwards, it is often not possible because of numerous subject-choices. Enrichment within different subjects is then a better strategy to implement.

- Very little is done to try and promote creativity, one of the most important aspects of gifted education. We are keenly awaiting the creativity tests of Prof. E.P. Torrance.

- Total standard acceleration is at the moment not allowed.

### 4.2.2 Curriculum-design

It isin this section of the program where most of the experimental schools have their worst problems, and the main reason for it being a lack of knowledge and a lack of trained staff. Individual schools tried to design their own curriculum and some had success. Most of the schools however, were stumbling around, trying to implement one ore more of the many available models.

The most popular model amongst the schools at this moment is Blooms Taxonomy of Objectives. It is not always used in the correct way but is of great help in guiding pupils to the higher levels of thinking (Some people use Bloom's Taxonomy as a lesson plan instead of setting objectives according to the different levels).

A valuable contribution to curriculum development was made by Prof. Taylor and Mr Van der Westhuizen with the publishing of their book "Die Onderrig van die Begaafde Kind" at the end of 1983.
Seven different models are described and a more detailed description is given of the models of Renzulli (Tri-ad model), Bloom and Tennant.[9)]

A work-committee on gifted education appointed by the H.S.R.C. have recently finished a report on curriculum design. In this report it is made clear that it would be unwise to use only one curriculum model as the model for gifted education. A flexible educationally-sound curriculum should be designed and this committee felt that the following components should be included irrespective of the model used:

- situation analyses
- aims and specific goals
- learning contents
- learning experiences and teaching methods
- learner-centered evaluation.

It is important to remember that in view of the major differences among gifted pupils each one actually needs its own curriculum and that the chances of a universal curriculum is virtually nil.[10)]

### 4.2.3 The Betts and Knapp Model

Betts and Knapp designed an interesting and valuable model on autonomous learning. This model can serve as a very useful framework on which to base a system applicable in South African High Schools, particularly desirable is the basic principle of the incorporation of both group activities and individual pursuits.(Figure 1)

The section on individual development in this model is also described in more detail (Figure 2). This is very valuable as all the different skills are discussed and it can be very useful especially to schools initiating a program for gifted pupils.[11)]

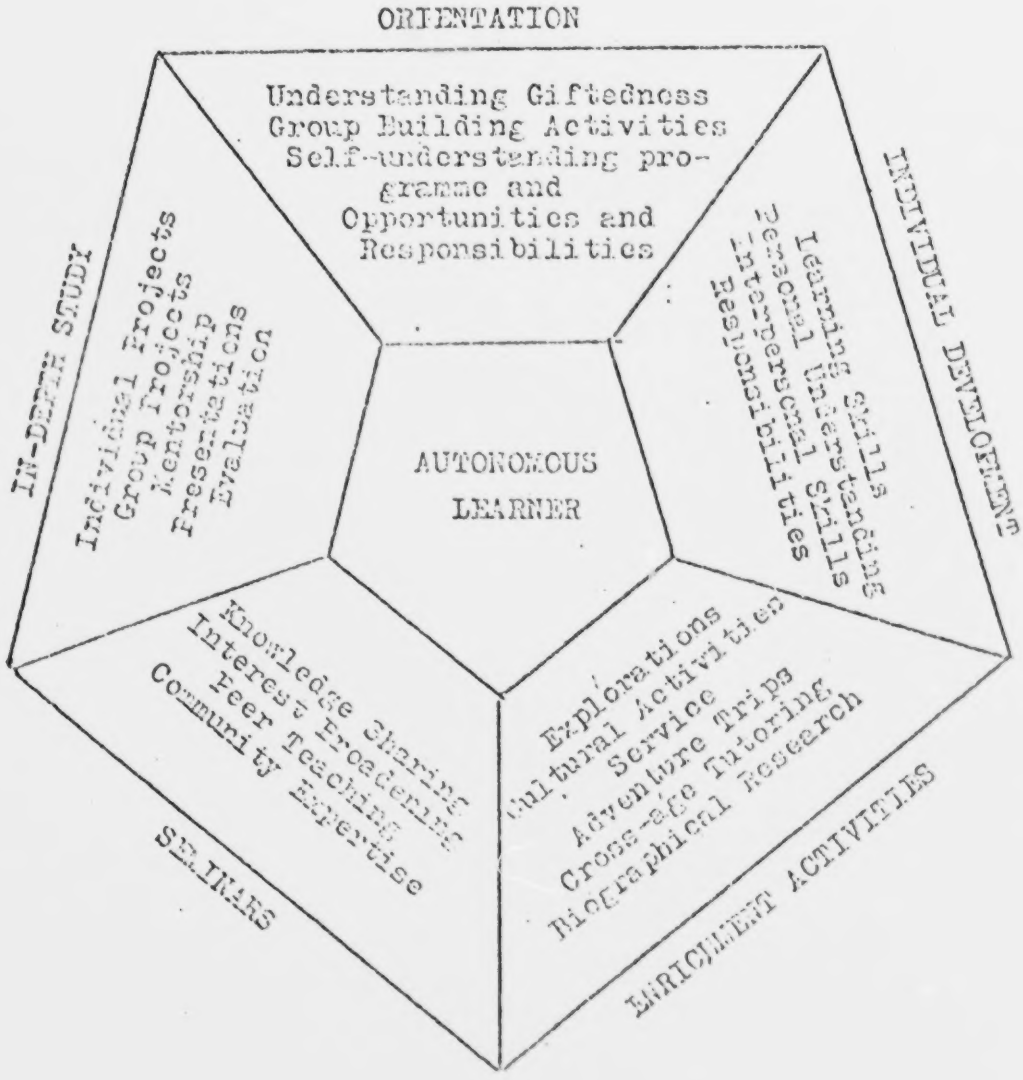


FIGURE 1. AUTONOMOUS LEARNING FOR THE GIFTED AND TALENTED MODEL (Betts and Knapp: 1980).

FIGURE 2

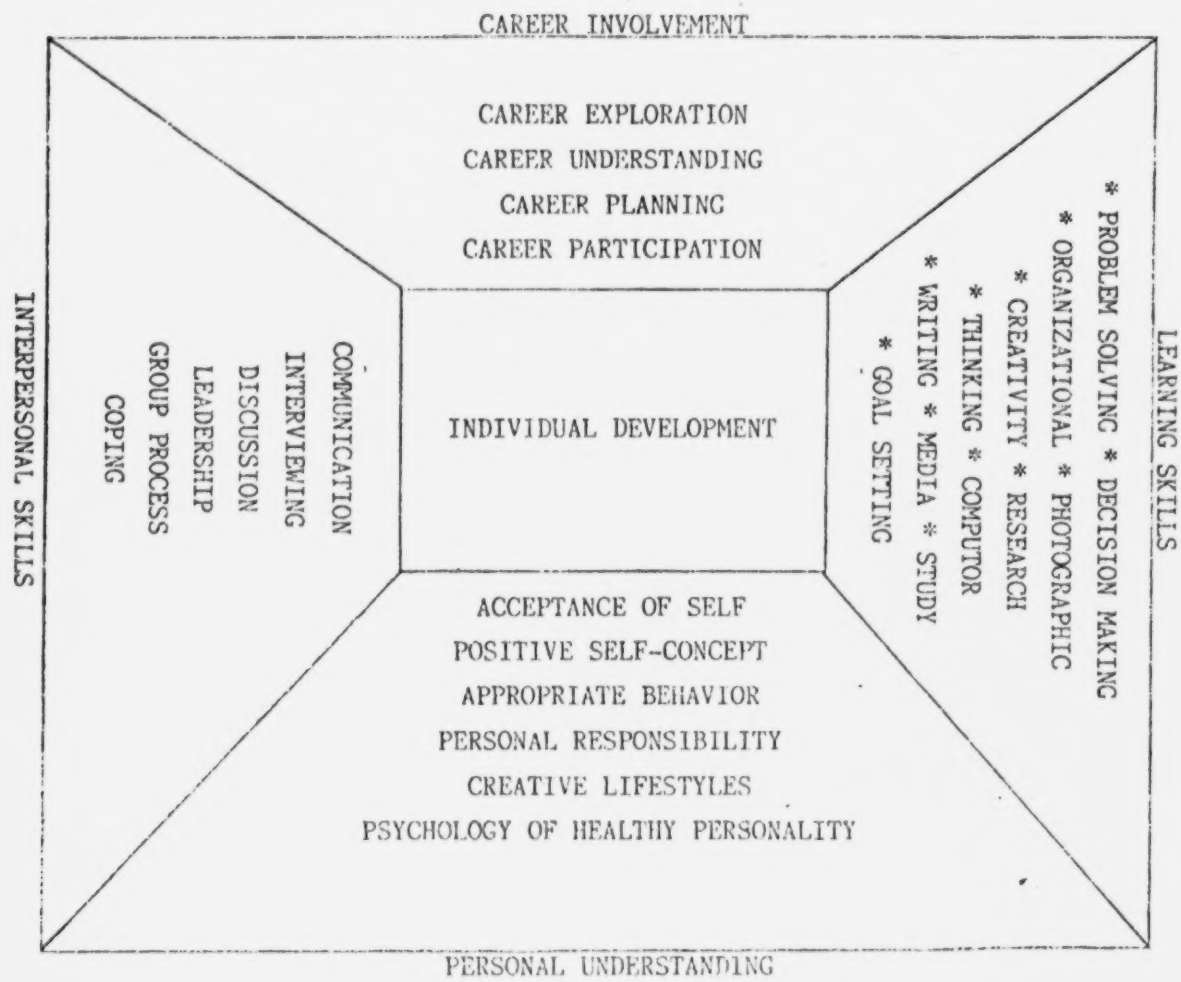


Figure 2. Skill Development (Betts and Knapp: 1980).

## 5. EVALUATION OF THE PROGRAM

Two basic evaluations should take place namely:

(i) Evaluation of the program as a whole,

(ii) Evaluation of thepupil's work.

### 5.1 Program-evaluation

The program can be evaluated effectively by means of questionnaires to the following people:

- the staff
- parents of gifted pupils
- gifted pupils themselves
- mentors/tutors

The questions in these questionnaires should be set in such a way that the goals of the program are evaluated so that the findings can be used to modify, develop and improve the program as a whole.

### 5.2 Evaluation of the pupil's work

Up to now this specific evaluation posed big problems for the experimental schools. All the school's representatives agreed that the products of these pupils (if there are) should be presented to other people in some or other way. This means that fellow schoolmates, fellow gifted mates, teachers and parents could all, in some or other way participate in the evaluation. This was and still is, however, not satisfactory. Gifted pupils want marks, like all other pupils, for the work they have done. The problem is to find a way of evaluating their work and incorporating the marks with the rest of a pupil's marks.

An important factor is that gifted pupils should not do extra work but the work they do should replace other work normally done by all pupils. At the moment this is not the case in more than 50% of the experimental schools, especially those ones doing project work. The only compensation for gifted pupils in those schools are the reports from the mentor or tutor or any expert on the specific subject, and the fact that he/she has learnt something in the process.

Schools where magnet classes are featuring are experimenting in giving those pupils other papers or additional papers. These pupils write the ordinary examination plus an additional one after which two lots of marks are shown on the report in different colours.[12)]

There are however other forms of evaluation which have not been tried like self-evaluation, process-evaluation (very important in gifted child education) as well as formative and summative evaluation.[13)]

CONCLUSION

Certain aspects have to be kept into consideration when initiating a program within a fixed educational system.

- Start off with a small group of pupils and make provision in only one or two subjects where staff and facilities are available.

- Certain pupils may initially lack the necessary skills e.g. to work on a project independantly.

- Pupils who were used to having the teacher in the role of dispenser of knowledge turn out to be convergent thinkers. Both these groups need training in research and thinking skills, to mention only two aspects.

- Guidance of all concerned have to take place continuously because lack of knowledge causes problems, especially within the community as well as between the identified gifted group and those not identified.

- Take sufficient time to plan and structure the program well before implementing it.

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